



## **Installation of Apache OpenMeetings 3.0.x on Ubuntu 14.04**

This tutorial is made based on fresh installations of

**ubuntu-14.04.1-desktop-amd64.iso**

It is tested with positive result. We will use the Apache's binary version OpenMeetings 3.0.4 stable, that is to say will suppress his compilation. It is done step by step.

23-2-2015

Starting...

**1)**

First update and upgrade the OS:

`sudo apt-get update`

`sudo apt-get upgrade`

**2)**

### **---- Installation of Oracle Java 1.8 ----**

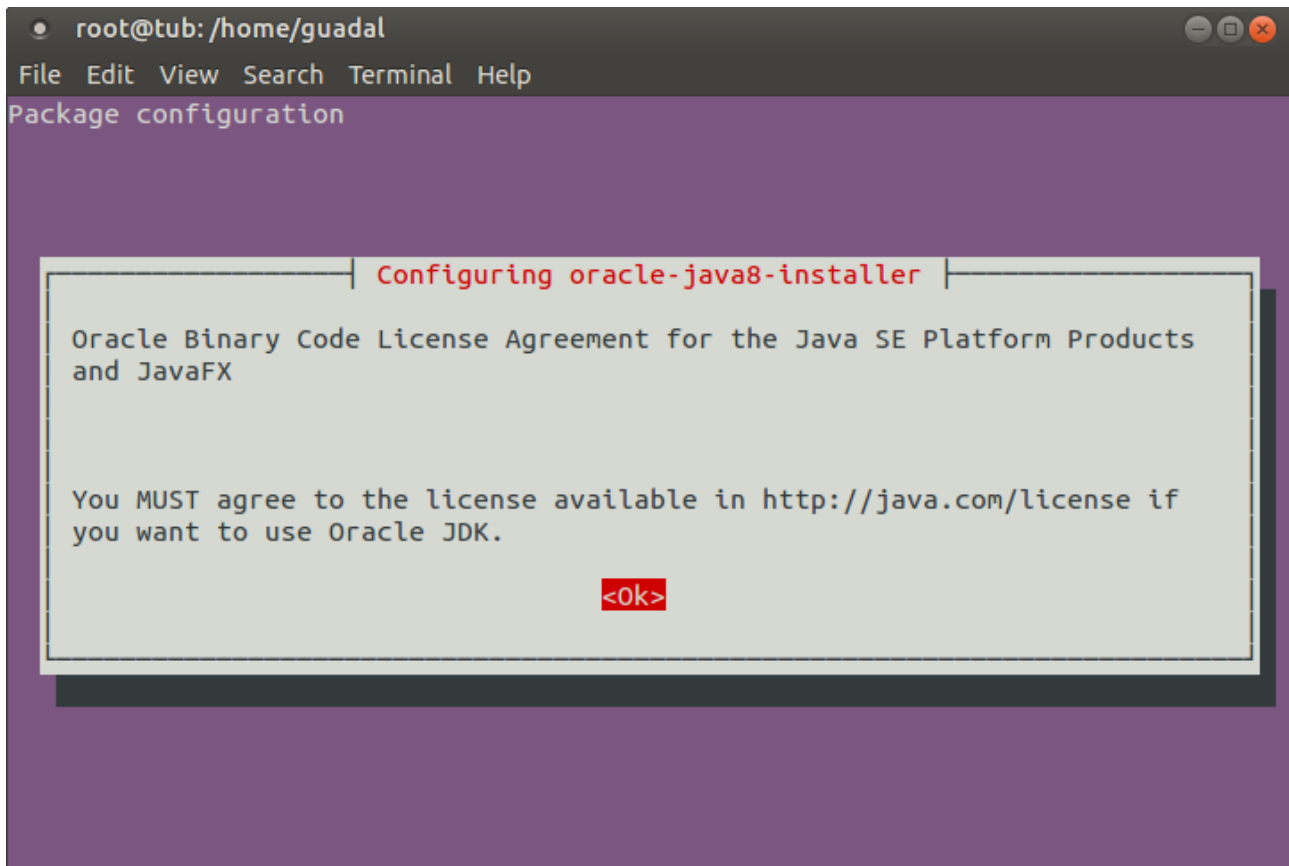
Red5-OM need Java to work. Add repository and install it:

`sudo add-apt-repository ppa:webupd8team/java`

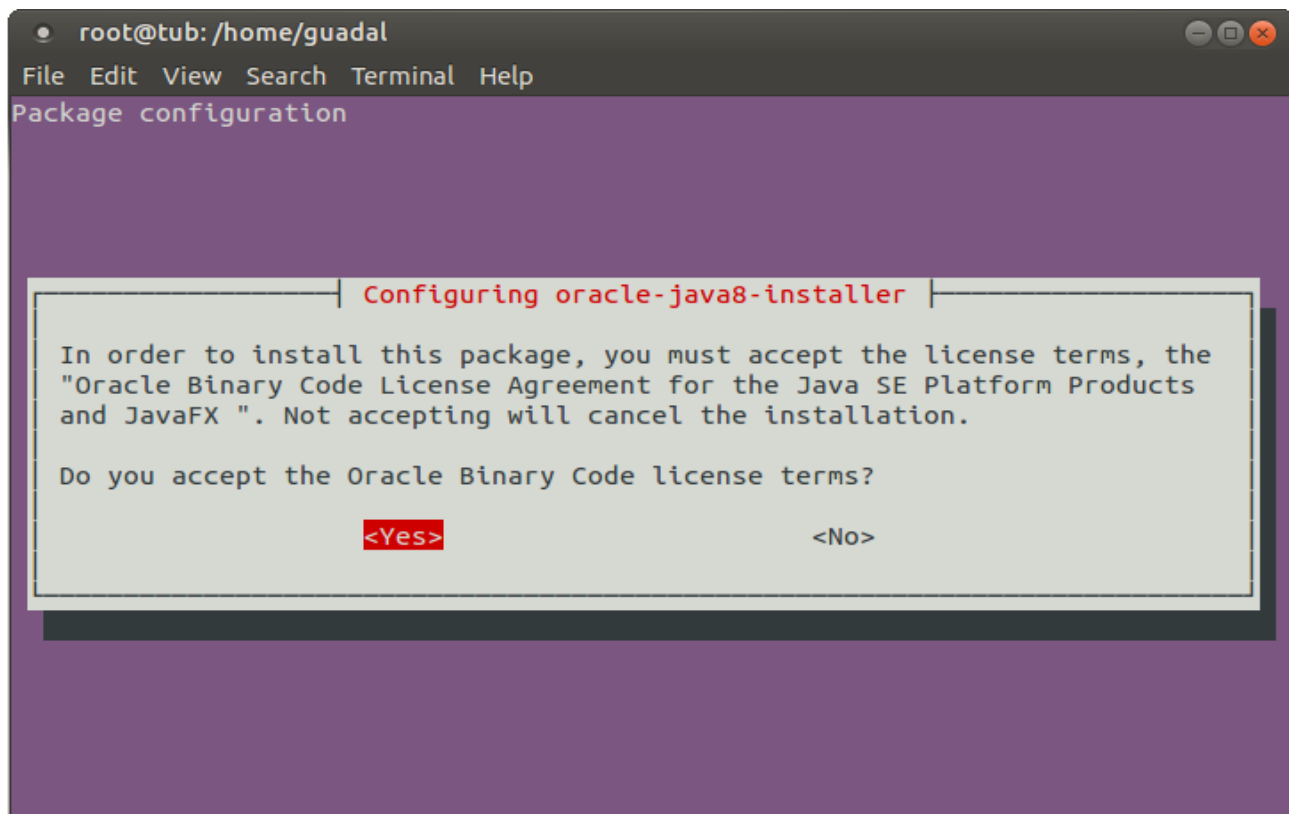
`sudo apt-get update`

`sudo apt-get install oracle-java8-installer`

Will open a window. Press **Enter**.



Will ask newly. Answer: **Yes** → **Enter**



If you have more than one java version, please chose Oracle Java 1.8:

```
sudo update-alternatives --config java
```

You can see the active java version:

```
java -version
```

To configure automaticaly the Java 8 Environment:

```
sudo apt-get install oracle-java8-set-default
```

3)

#### ---- Installation of LibreOffice ----

LibreOffice is need it to convert to pdf the uploaded files.

The ubuntu desktop iso have already LibreOffice installed, so don't need install it.

This is only for server ubuntu iso.

```
sudo add-apt-repository ppa:libreoffice/ppa
```

```
sudo apt-get update
```

```
sudo apt-get install libreoffice
```

Now some kind of information only:

LibreOffice installation folder is **/usr/lib/libreoffice**.

4)

#### --- Installation ImageMagic, Sox and Swftools ---

**ImageMagic** will work the image files. Will install it and some more libraries.

```
sudo apt-get install imagemagick gdebi libgif4 libjpeg62 synaptic zlib1g-dev liboil0.3 unzip
```

**Sox** work the sound. Will compile.

```
cd /opt
```

```
wget http://sourceforge.net/projects/sox/files/sox/14.4.1/sox-14.4.1.tar.gz
```

```
tar xzvf sox-14.4.1.tar.gz
```

```
cd /opt/sox-14.4.1
```

```
./configure --enable-libmp3lame
```

```
make && make install
```

**Swftools** work converting to swf the uploaded files.

Don't use a newer version swftools file. Don't have pdf2swf.

For **64** bit:

```
cd /opt
```

```
wget https://launchpad.net/ella-rennaissance/ella-rennaissance-beta/beta1/+download/swftools\_0.9.1-1\_amd64.deb
```

```
dpkg -i swftools_0.9.1-1_amd64.deb
```

...the files will be installed in: /usr/local/bin

For **32** bit:

```
cd /opt
```

```
wget http://www.tataranovich.com/debian/pool/squeeze/main/s/swftools/swftools\_0.9.1-1\_i386.deb
```

```
dpkg -i swftools_0.9.1-1_i386.deb
```

...the files will be installed in: /usr/local/bin

5)

#### ---- Installation of Adobe flash player ----

OpenMeetings even need Adobe Flash Player for rooms.

```
sudo apt-get install flashplugin-installer
```

6)

**---- Installation of Jodconverter ----**

**Jodconverter** work to convert uploaded files.

```
cd /opt
```

```
wget http://jodconverter.googlecode.com/files/jodconverter-core-3.0-beta-4-dist.zip
```

```
unzip jodconverter-core-3.0-beta-4-dist.zip
```

7)

**---- Compilation of FFmpeg ----**

**Ffmpeg** will work with video.

This compilation is based on:

<https://trac.ffmpeg.org/wiki/CompilationGuide/Ubuntu>

Install libraries.

(In only one line with space between each one)

```
sudo apt-get -y --force-yes install autoconf automake build-essential libass-dev libfreetype6-dev  
libgpac-dev libSDL1.2-dev libtheora-dev libtool libva-dev libvdpau-dev libvorbis-dev libxcb1-dev  
libxcb-shm0-dev libxcb-xfixes0-dev pkg-config texi2html zlib1g-dev nasm
```

Make a folder where download the necessary files to compile.

```
mkdir ~/ffmpeg_sources
```

```
cd ~/ffmpeg_sources
```

```
wget http://www.tortall.net/projects/yasm/releases/yasm-1.3.0.tar.gz
```

```
wget http://download.videolan.org/pub/x264/snapshots/last\_x264.tar.bz2
```

```
wget -O fdk-aac.zip https://github.com/mstorsjo/fdk-aac/zipball/master
```

```
wget http://downloads.sourceforge.net/project/lame/lame/3.99/lame-3.99.5.tar.gz
```

```
wget http://downloads.xiph.org/releases/opus/opus-1.1.tar.gz
```

wget <http://webm.googlecode.com/files/libvpx-v1.3.0.tar.bz2>

wget <http://ffmpeg.org/releases/ffmpeg-snapshot.tar.bz2>

Start to compile.

**1) --- Yasm ---**

```
cd ~/ffmpeg_sources
```

```
tar xzvf yasm-1.3.0.tar.gz
```

```
cd yasm-1.3.0
```

```
./configure --prefix="$HOME/ffmpeg_build" --bindir="$HOME/bin"
```

```
make
```

```
make install
```

```
make distclean
```

**2) --- libx264 ---**

```
cd ~/ffmpeg_sources
```

```
tar xjvf last_x264.tar.bz2
```

```
cd x264-snapshot*
```

(In only one line with space)

```
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build"  
--bindir="$HOME/bin" --enable-static
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make distclean
```

**3) --- libfdk-aac ---**

```
cd ~/ffmpeg_sources
```

```
unzip fdk-aac.zip
```

```
cd mstorsjo-fdk-aac*
```

```
autoreconf -fiv
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

#### 4) --- libmp3lame ---

```
cd ~/ffmpeg_sources
```

```
tar xzvf lame-3.99.5.tar.gz
```

```
cd lame-3.99.5
```

```
./configure --prefix="$HOME/ffmpeg_build" --enable-nasm --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

#### 5) --- libopus ---

```
cd ~/ffmpeg_sources
```

```
tar xzvf opus-1.1.tar.gz
```

```
cd opus-1.1
```

```
./configure --prefix="$HOME/ffmpeg_build" --disable-shared
```

```
make
```

```
make install
```

```
make distclean
```

6)            --- libvpx ---

```
cd ~/ffmpeg_sources
```

```
tar xjvf libvpx-v1.3.0.tar.bz2
```

```
cd libvpx-v1.3.0
```

```
PATH="$HOME/bin:$PATH" ./configure --prefix="$HOME/ffmpeg_build" --disable-examples
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make clean
```

7)            --- ffmpeg ---

```
cd ~/ffmpeg_sources
```

```
tar xjvf ffmpeg-snapshot.tar.bz2
```

```
cd ffmpeg
```

(In only one line with space between each one)

```
PATH="$HOME/bin:$PATH" PKG_CONFIG_PATH="$HOME/ffmpeg_build/lib/pkgconfig"
./configure --prefix="$HOME/ffmpeg_build" --extra-cflags="-I$HOME/ffmpeg_build/include"
--extra-ldflags="-L$HOME/ffmpeg_build/lib" --bindir="$HOME/bin" --enable-gpl --enable-libass
--enable-libfdk-aac --enable-libfreetype --enable-libmp3lame --enable-libopus --enable-libtheora
--enable-libvorbis --enable-libvpx --enable-libx264 --enable-nonfree
```

```
PATH="$HOME/bin:$PATH" make
```

```
make install
```

```
make distclean
```

```
hash -r
```

-----  
The compilation is finished.  
-----



Now we have the compiled files in: ~/bin

and: ~/ffmpeg\_build/bin

Should copy all them to /usr/local/bin to be enabled:

```
cd ~/bin
```

```
cp ffmpeg ffplay ffprobe ffserver vsyasm x264 yasm yasm /usr/local/bin
```

```
cd ~/ffmpeg_build/bin
```

```
cp lame /usr/local/bin
```

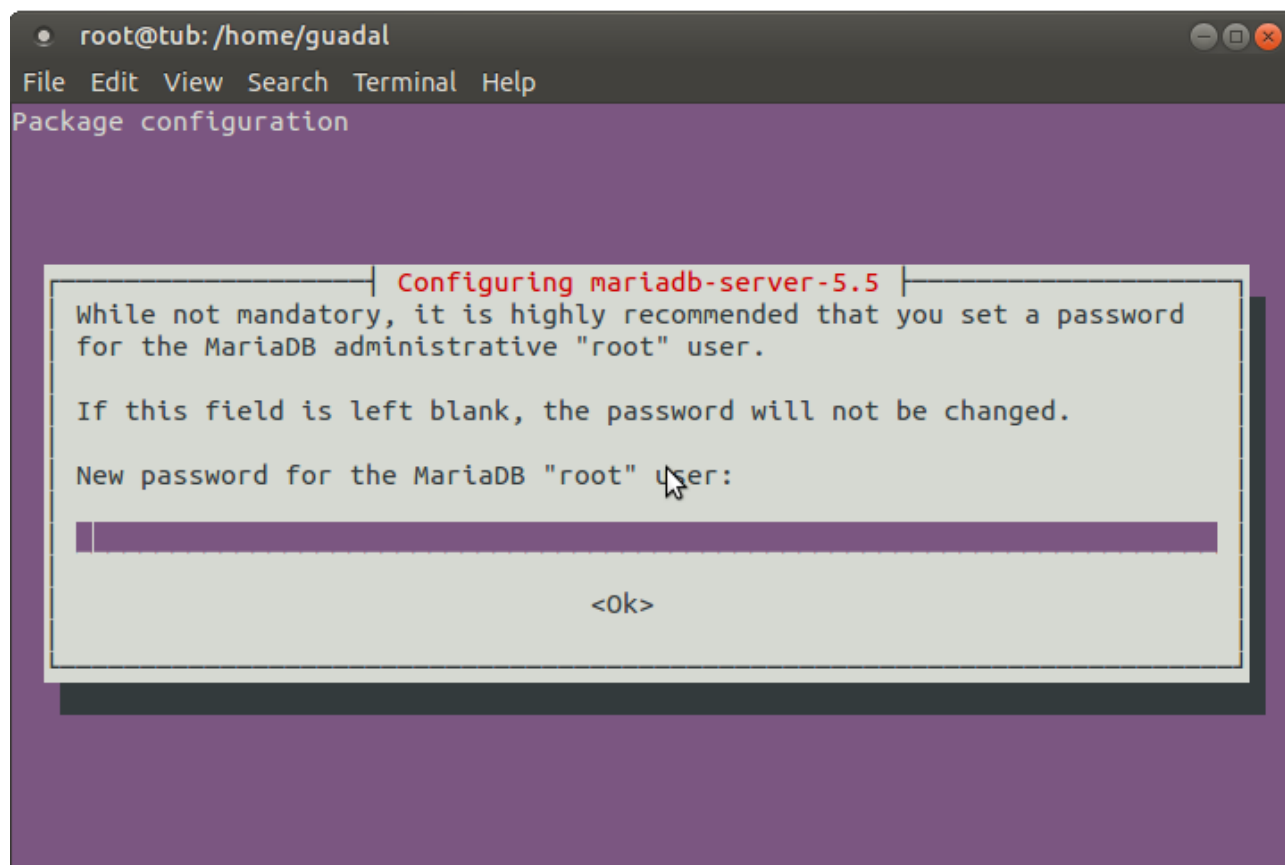
8)

#### ---- Installation and configuration of MariaDB database server ----

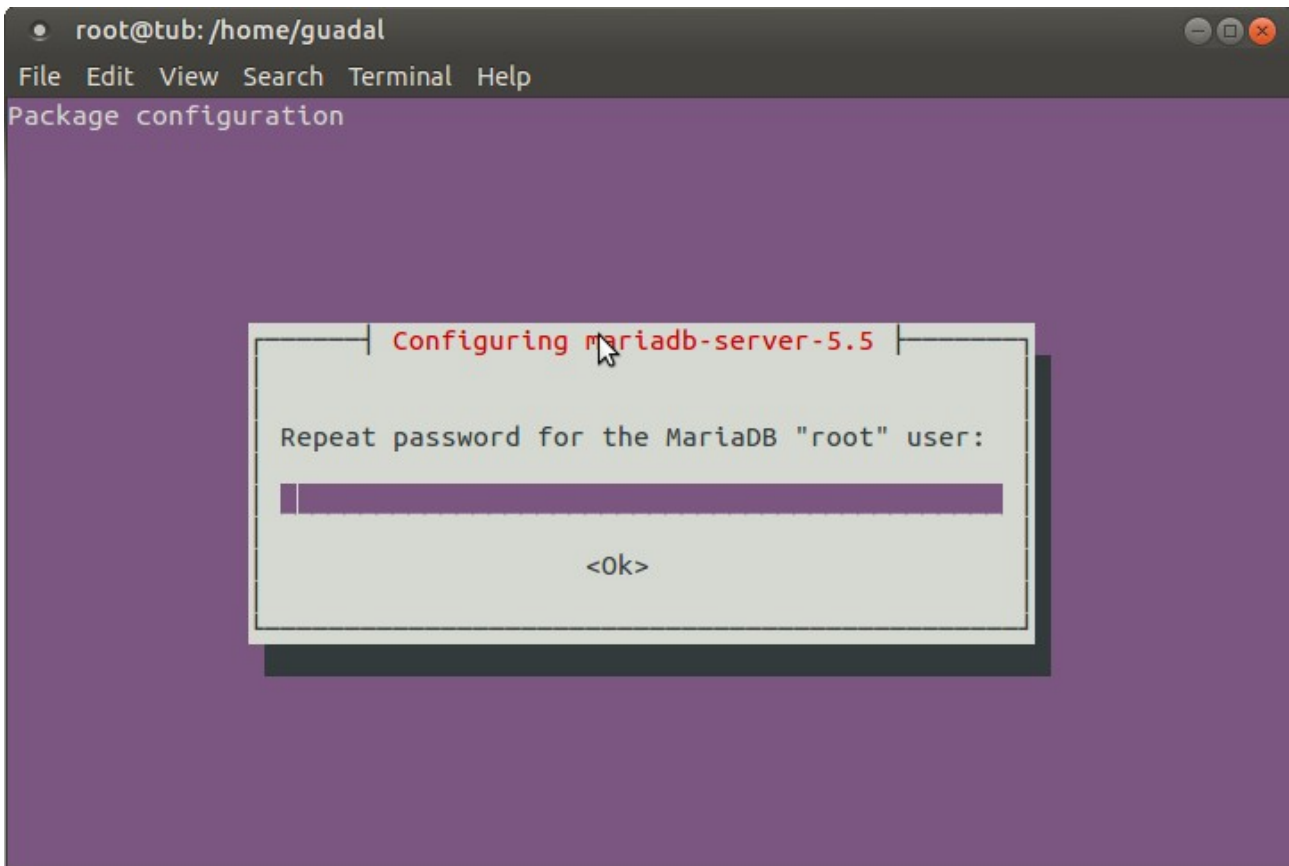
**MariaDB** is the database server. Will install it.

```
sudo apt-get install mariadb-server
```

Will open a window asking for a root MariaDB password. Type it → OK → **Enter**



Will ask repeat the password:



Run MariaDB:

```
/etc/init.d/mysql start
```

Make a database with his own user for OpenMeetings:

```
mysql -u root -p
```

...will ask for the root password that we have just chosen, type it...

```
MariaDB [(none)]> CREATE DATABASE open304 DEFAULT CHARACTER SET 'utf8';
```

With this command we has created a called database open304 though you can choose another name to your wish.

Now we create a user with all the permission on this open304 database.

(In only one line with space)

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON open304.* TO 'openmeetings'@'localhost'  
IDENTIFIED BY '123456' WITH GRANT OPTION;
```

- \* **open304** .....is the database name.
- \* **openmeetings** ...is the user name for the database.
- \* **123456** .....is the password of the user called **openmeetings**.

You can change the data...but remember it!

MariaDB [(none)]> **quit**

9)

#### ---- Installation of OpenMeetings ----

We'll install OpenMeetings in /opt/red5304. All the following information will be based on this directory.

Call to our folder of installation **red5304**

Make the folder:

```
mkdir /opt/red5304
```

```
cd /opt/red5304
```

```
wget http://apache.rediris.es/openmeetings/3.0.4/bin/apache-openmeetings-3.0.4.zip
```

```
unzip apache-openmeetings-3.0.4.zip
```

...remove the unloaded file:

```
rm -f apache-openmeetings-3.0.4.zip
```

Do to **nobody** owner of the whole OpenMeetings folder installation:

```
chown -R nobody /opt/red5304
```

Unload and install the connector between OpenMeetings and MariaDB:

```
cd /opt
```

```
wget http://repo1.maven.org/maven2/mysql/mysql-connector-java/5.1.34/mysql-connector-java-5.1.34.jar
```

...and copy it to where must be:

```
cp /opt/mysql-connector-java-5.1.34.jar /opt/red5304/webapps/openmeetings/WEB-INF/lib
```

Now we are going to form OpenMeetings for our database in MariaDB:

```
cd /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF
```

```
mv persistence.xml persistence.xml-ori
```

```
mv mysql_persistence.xml persistence.xml
```

```
gedit /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

...to change on **line 81**

```
, Url=jdbc:mysql://localhost:3306/openmeetings
```

...to

```
, Url=jdbc:mysql://localhost:3306/open304
```

...it is the name of the database that we did initially.

... to change on **line 86**

```
, Username=root
```

...to

```
, Username=openmeetings
```

...is the user that we did initially for the database.

...to change on **line 87**

```
, Password=" />
```

...to

```
, Password=123456" />
```

...it is the password that we did initially for the user "openmeetings" in the database.

Logically if initially you chose another name and password for the database, you will to change them here.

We protect the access to the file:

```
chmod 640 /opt/red5304/webapps/openmeetings/WEB-INF/classes/META-INF/persistence.xml
```

10)

---- Script to launch red5-OpenMeetings ----

Do a script of run and stop red5-OpenMeetings that we will call "red5"

[gedit /etc/init.d/red5](#) ...copy, paste and save the whole green text of below

```
#!/bin/bash
# For RedHat and cousins:
# chkconfig: 2345 85 85
# description: Red5 flash streaming server
# processname: red5
# Created By: Sohail Riaz (sohaileo@gmail.com)
PROG=red5
RED5_HOME=/opt/red5304
DAEMON=$RED5_HOME/$PROG.sh
PIDFILE=/var/run/$PROG.pid
# Source function library
# . /etc/rc.d/init.d/functions
[ -r /etc/sysconfig/red5 ] && . /etc/sysconfig/red5
RETVAL=0
case "$1" in
start)
#      echo -n "Starting $PROG: "
cd $RED5_HOME
      start-stop-daemon --start -c nobody --pidfile $PIDFILE
$DAEMON >/dev/null 2>/dev/null &
RETVAL=$?
if [ $RETVAL -eq 0 ]; then
echo $! > $PIDFILE
#      touch /var/lock/subsys/$PROG
fi
#      [ $RETVAL -eq 0 ] && success "$PROG startup" || failure "$PROG startup"
echo
;;
stop)
      start-stop-daemon --stop --quiet --pidfile $PIDFILE \
          --name java
rm -f $PIDFILE
echo
[ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/$PROG
;;
restart)
$0 stop
$0 start
;;
status)
status $PROG -p $PIDFILE
RETVAL=$?
;;
*)
echo $"Usage: $0 {start|stop|restart|status}"
```

```
RETVAL=1
esac
exit $RETVAL
```

...till here.

Give permission of execution to the script made it:

```
chmod +x /etc/init.d/red5
```

11)

Start MariaDB if still it is not:

```
/etc/init.d/mysql start
```

...and now we start red5-OpenMeetings:

```
/etc/init.d/red5 start
```

...will appear two text lines in the shell:

```
start-stop-daemon: --start needs --exec or --startas
Try 'start-stop-daemon --help' for more information.
```

...you do nothing. Don't worry, everything work right.

...wait 10 seconds *at least* in order that red5 it is runing completely, and later can go to:

<http://localhost:5080/openmeetings/install>

...there will have to appear a page similar to this one:



## OpenMeetings

### OpenMeetings - Installation

#### 1. Recommendation for production environment

By default OpenMeetings uses the integrated Apache Derby database. For production environment you should consider using [MySQL](#), [Postgres](#) or for example [IBM DB2](#) or [Oracle](#)

#### 2. Enabling Image Upload and import to whiteboard

- Install **ImageMagick** on the server, you can get more information on <http://www.imagemagick.org> regarding installation. The instructions for installation can be found there <http://www.imagemagick.org/script/binary-releases.php>, however on most linux systems you can get it via your favorite package managers (apt-get it)

#### 3. Enabling import of PDFs into whiteboard

- Install **GhostScript** on the server, you can get more information on <http://pages.cs.wisc.edu/~ghost/> regarding installation. The instructions for installation can be found there, however on most linux systems you can get it via your favorite package managers (apt-get it).
- Install **SWFTools** on the server, you can get more information on <http://www.swftools.org/> regarding installation. Some of the Linux distributions already have it in there package manager see <http://packages.debian.org/unstable/utils/swftools>, the recommended version of **SWFTools** is 0.9 as prior version have a bug that does lead to wrong object dimensions in the Whiteboard

#### 4. Enabling import of .doc, .docx, .ppt, .pptx, ... all Office Documents into whiteboard

- **OpenOffice-Service** started and listening on port 8100, see [OpenOfficeConverter](#) for details

#### 5. Enabling Recording and import of .avi, .flv, .mov and .mp4 into whiteboard

...click on **Next** (bottom)

...and this another page will appear:



## OpenMeetings

### OpenMeetings - Installation

#### Userdata

Username

Userpass

EMail

User Time Zone

#### Organisation(Domains)

Name

< Previous

Next >

Last

Finish

...here we have to introduce necessarily, to be able to continue, the following:

**Username** = **a-name** ...this user will be administrator.

**Userpass** = **password** ...for the previous user.

**Email** = **email-address** ...of the previous user.

**User Time Zone** = Country where is this server

Organisation(Domains)

**Name** = **example-openmeetings** ...group name to choose.

Go below completely of the page and touch the button **Finish**



## OpenMeetings

OpenMeetings - Installation
<p>Please click "Finish" button to start installation!</p> <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
<div style="text-align: right;"> <span>&lt; Previous</span> <span>Next &gt;</span> <span>Last</span> <span>Finish</span> </div>

...and wait a *moment* till the tables are fill in the database.  
When has concluded, this another page will appear:



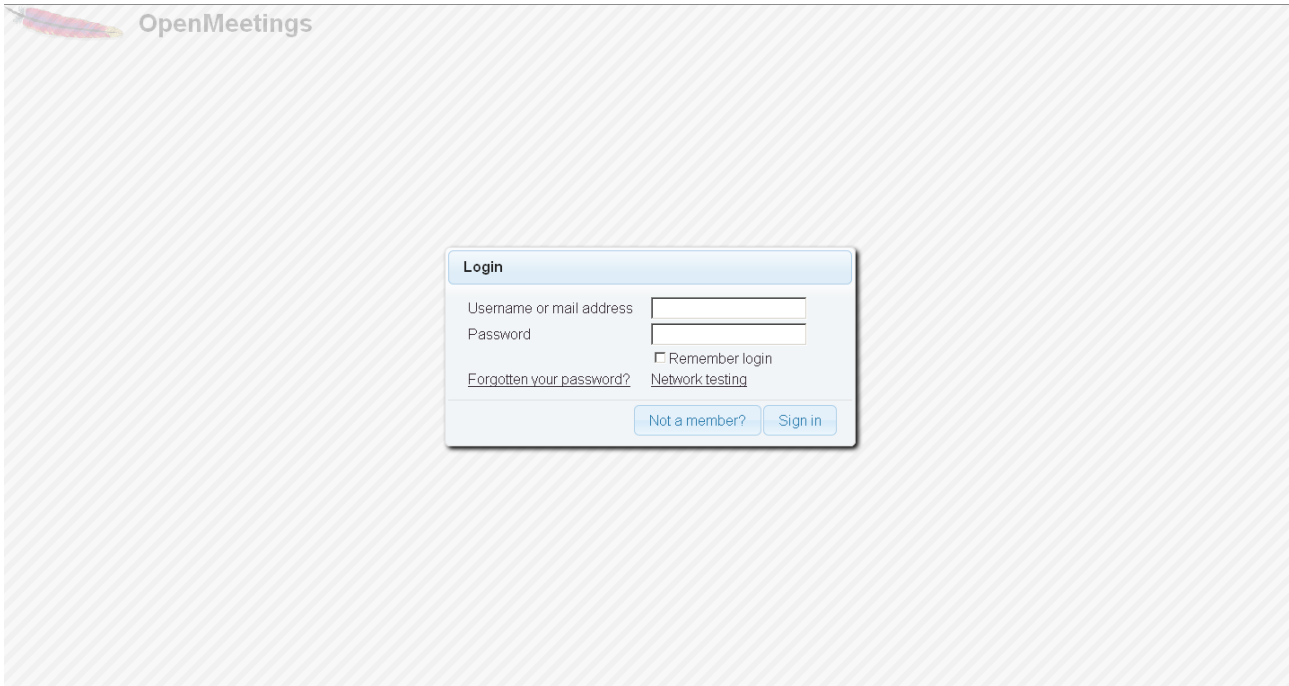
## OpenMeetings

OpenMeetings - Installation
<p><b><u><a href="#">Enter the Application</a></u></b></p> <p>If your Red5-Server runs on a different Port or on a different domain  <a href="#">alter the config values of the client</a></p> <p><b>Mailing list</b></p> <p><a href="http://openmeetings.apache.org/mail-lists.html">http://openmeetings.apache.org/mail-lists.html</a></p> <p>There are some companies that also offer commercial support for Apache OpenMeetings:</p> <p><a href="http://openmeetings.apache.org/commercial-support.html">http://openmeetings.apache.org/commercial-support.html</a></p>
<div style="text-align: right;"> <span>&lt; Previous</span> <span>Next &gt;</span> <span>Last</span> <span>Finish</span> </div>



...click on [Enter the Application](#)

..and we should see OpenMeetings's entry:



Introduce the user's name and the password that you have chosen during the installation and

**...Congratulations!**

The next time that you wants to accede to OpenMeetings will be:

<http://localhost:5080/openmeetings>

Remember to open in the server the three following ports:

5080 1935 8088

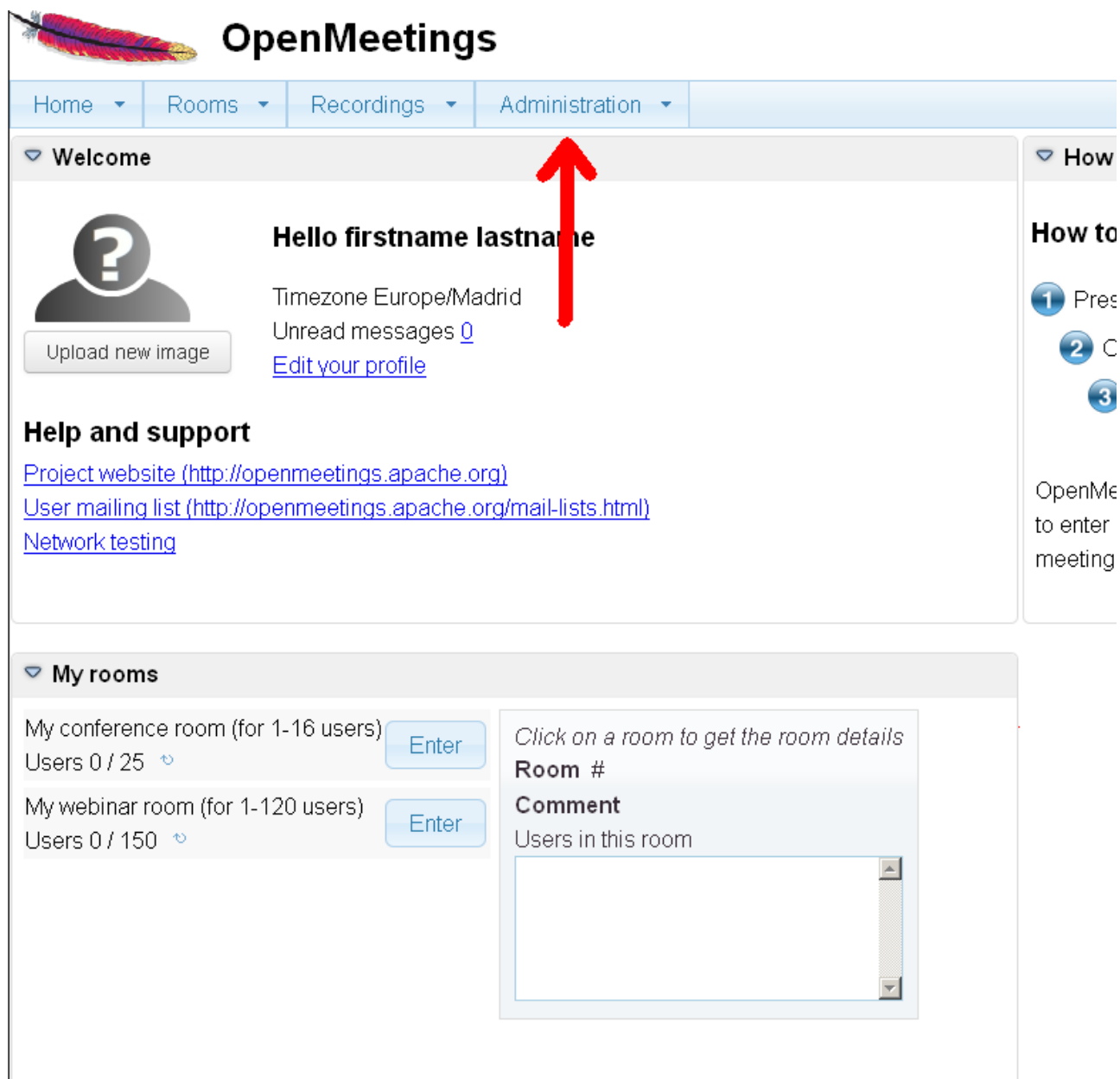
...in order that it could accede to OpenMeetings from other machines.

14)

---- OpenMeetings's configuration ----

Once you acced to OpenMeetings go to:


**Administration → Configuration**



**OpenMeetings**

Home ▾ Rooms ▾ Recordings ▾ Administration ▾

▼ Welcome

 **Hello firstname lastname**

Timezone Europe/Madrid  
Unread messages [0](#)  
[Edit your profile](#)

Upload new image

**Help and support**

[Project website \(http://openmeetings.apache.org\)](http://openmeetings.apache.org)  
[User mailing list \(http://openmeetings.apache.org/mail-lists.html\)](http://openmeetings.apache.org/mail-lists.html)  
[Network testing](#)

▼ My rooms

My conference room (for 1-16 users) [Enter](#)  
Users 0 / 25 ↻

My webinar room (for 1-120 users) [Enter](#)  
Users 0 / 150 ↻

*Click on a room to get the room details*

**Room #**  
**Comment**  
Users in this room

**How to**

1 Pres  
2 C  
3

OpenMe  
to enter  
meeting

...introduce the parameters for the conversion of files, the audio and the video:

Clic on: **swftools\_path**...and to the right in **Value** type: **/usr/local/bin**

Clic on: **imagemagick\_path**...and to the right in **Value** type: **/usr/bin**

Clic on: **sox\_path**...and to the right in **Value** type: **/usr/local/bin**

Clic on: **ffmpeg\_path**...and to the right in **Value** type: **/usr/local/bin**

Clic on: **office.path**...and to the right in **Value** type (32 bit): /usr/lib/libreoffice

Clic on: **office.path**...and to the right in **Value** type (64 bit): /usr/lib/libreoffice

Clic on: **jod.path**...and to the right in **Value** type: /opt/jodconverter-core-3.0-beta-4/lib

The screenshot shows the OpenMeetings Administration interface. On the left is a table of configurations, and on the right is a configuration form. Red arrows indicate the steps to edit the 'ffmpeg\_path' configuration:

- Arrow 1 points to the 'ffmpeg\_path' row in the configuration table.
- Arrow 2 points to the 'Value' field in the configuration form.
- Arrow 3 points to the 'Key' field in the configuration form.

ID	Key	Value
12	mail.smtp.connection.timeout	30000
13	mail.smtp.timeout	30000
14	application.name	OpenMeetings
15	default_lang_id	1
16	swftools_zoom	100
17	swftools_jpegquality	85
18	swftools_path	
19	imagemagick_path	
20	sox_path	
21	ffmpeg_path	
22	office.path	
23	jod.path	/opt/jod/lib
24	rss_feed1	http://mail-archives.apache.org/mod_mbox/openmeetings-user/?format=atom
25	rss_feed2	http://mail-archives.apache.org/mod_mbox/openmeetings-dev/?format=atom
26	sendEmailAtRegister	0
27	sendEmailWithVerificationCode	0
28	default_export_font	TimesNewRoman
29	default.rpc.userid	1
30	application.base.url	http://localhost:5080/openmeetings/
31	red5sip.enable	no
32	red5sip.room_prefix	400

The configuration form on the right shows the 'Key' field set to 'ffmpeg\_path' and the 'Value' field empty. The 'Comment' field contains 'Path To FFMPEG'.

Now there is OpenMeetings ready to work rightly.

## 15)

We are going to remove files and folders that already do not serve us, if you do not want to save them.

```
rm -f /opt/jodconverter-core-3.0-beta-4-dist.zip
```

```
rm -f /opt/mysql-connector-java-5.1.34.jar
```

```
rm -f /opt/sox-14.4.1.tar.gz
```

```
rm -f -R /opt/sox-14.4.1
```

And this is all.

If you have some doubt or question, please raise it in the Apache OpenMeetings forums:

<http://openmeetings.apache.org/mail-lists.html>

Thank you

Alvaro Bustos